ABSTRACT

A computer-based switch enables automated testing of the
fail-over and load-balancing operations of a cluster of
network servers. The computer-based switch includes a control
component, a switching component, and a plurality of network
adapters each for forming a connection with a network server.
The switching component directs network communication data
received from clients on an external network to the network
servers through the network adapters. The network adapters
are selectively disabled and re-enabled by the control
component to create connection failure and recovery
conditions. The switching component is also programmable to
operate on the network communication data passing therethrough
to create other test conditions such as communication delay,
data loss, data reordering, and data corruption. The
switching component also allows communication flows from the
individual network servers to the clients to be monitored for
determining whether load balancing of the servers is properly
performed.